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PROGRESS REPORT FOR ²⁰MARCH 1957

REDESIGN OF CLAM, 1210-C-10

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Clam Type

The [redacted], who was awarded the contract for the molding of the Clam, submitted samples from the first run for our approval. We were very much pleased with the Clam, considering that these were the first pieces molded. A very thorough inspection was made of these pieces in regard to functional and end use. Our check indicated that several mold modifications had to be made:

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1. Increase wall thickness of box around center cavity to insure a better seal between the box and cover.
2. All outside edges to have 1/8" radius for concealment and handling purposes.
3. Sand blast finish on all outside surfaces of box to lessen its reflective quality.
4. Remove portion of edge of box to permit easy removal of safety pin from pencil.
5. Increase size of the two outside 3/16" diameter holes to facilitate assembly of pencils.
6. Eliminate all flash marks at sealing points.
7. Modify adapter to facilitate its assembly to the box and the detonator.
8. Modify magnet coating mold to improve mold safety aspect and decrease molding time.

After the above modifications were made to the mold, samples were submitted for our approval. These were inspected and met with our revised drawings and specifications. The seal between the box and cover proved to be watertight, which was beyond the expectations of the qualified experts in the field of watertight closures, with whom we had consulted originally.

Future Work

Three hundred units will be tested to verify their reliability under maximum adverse conditions.

4 Progress Reports
Redesign of Clam
Nov-56 - Mar '57

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REDESIGN OF CLAM, 1210-C-10

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Financial Statement

Total Amount of Contract	\$23,449.50
Obligations for March, 1957	1,127.42
Total Obligations to March 24, 1957	14,512.70
Balance of Contract	\$ 8,936.80

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Expiration Date - April 30, 1957

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PROGRESS REPORT

FOR

JANUARY 1957

ON

REDESIGN OF CLAM

1210-C-10

February 28, 1957

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The task of redesigning the Clam has progressed to the mold fabrication stage. These molds will be ready for a test run about the first of March.

The torsion spring used in the Clam assembly has been redesigned and a prototype built and tested. The pre-load of the torsion spring was increased by approximately 25 per cent. This was accomplished by decreasing the coil diameter from 13/32 to 5/16, using the same size wire (.054 diameter). The bracket which contains this spring when assembled is being modified so that the pin used in the spring and bracket assembly can be eliminated. A prototype of the spring and bracket assembly is being built for testing purposes in regard to end use and ease of assembly.

Various techniques for sealing the insert into the box are being investigated. The hot gas welding technique was tried but discarded because it consumed too much time.

Future Work

The spring and bracket assembly will be tested and a vendor selected for each item. A method for sealing the insert into the box will be selected. Close contact will be maintained with the mold fabricator in order to expedite this work.

Financial Statement

Total Amount of Contract	\$23,449.50
Obligations for January, 1957	2,981.90
Total Obligations to 27 January 1957	12,182.59
Balance of Contract	\$11,266.91

Expiration Date - April 30, 1957

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PROGRESS REPORT

FOR

DECEMBER 1956

ON

REDESIGN OF CLAM

1210-C-10

January 23, 1957

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Progress concerning the Clam Project has been confined to the design, fabrication and purchase of the necessary component parts to produce a prototype lot of these units. Alnico VI magnets have been received and checked dimensionally and are as specified in our print.

During the Project Officer's last visit to the base, we visited the [redacted], who was awarded the contract for the design and fabrication of the molds, as well as the molding of the plastic parts to be used in this task. We were thoroughly familiarized with the plant equipment and shown samples of their work. The Project Officer indicated that he was well pleased with the selection of the vendor and the plant facilities.

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Tests were made on the coil springs to be used in the Clam assembly, and the results were quite impressive with one exception. It was felt that the pre-load of the springs should be increased by about 25 per cent. The coil spring was redesigned to have this additional pre-load capacity, and prototypes are being made at present.

Future Work

Close contact will be kept with the molders to expedite this phase of the task within the allotted time. The new coil spring will be tested to determine if its pre-load is correct.

Vendors will be selected for the fabrication of the springs and brackets.

Financial Statement

Total Amount of Contract	\$23,449.50
Obligations for December, 1956	404.49
Total Obligations to December 23, 1956	9,549.43
Balance of Contract	\$13,900.07

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Expiration Date - April 30, 1957

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**PROGRESS REPORT
FOR
NOVEMBER 1956
ON
REDESIGN OF CLAM**

1210-C-10

December 21, 1956

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The design phase of the clam project has been completed and the vendors selected who are to fabricate the parts, with the exception of the springs. This vendor will be selected soon.

The [] has been awarded the contract for the fabrication of the molds for the polyethylene box, as well as the molding of these units. The Crucible Steel Company of America located at Harrison, New Jersey, has been awarded the contract for the fabrication of the Alnico VI-B magnets. Drawings and engineering specifications of the clam project, which were submitted to the Engineering Department of the Universal Match Corporation in St. Louis, Missouri, for a dimensional check, have been completed and returned to this office.

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Future Work

A vendor will be selected for the fabrication of the springs and close contact will be maintained with the vendor who is fabricating the molds.

Financial Statement

Total Amount of Contract	\$23,449.50
Obligations for November, 1956	271.22
Total Obligations to 25 November 1956	9,144.94
Balance of Contract	\$14,304.56

Expiration Date - April 30, 1957

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